

CLAIMS

We claim:

1. A light guide plate for introducing light beams from a light source into a liquid crystal display, comprising:

an incident surface for introducing light beams into the light guide plate;

an emitting surface for uniformly transmitting light beams out from the light guide plate;

a bottom surface opposite to the emitting surface for reflecting the light beams in directions toward the emitting surface; and

a color filter disposed on the emitting surface, the color filter comprising a color layer for a full color display.
2. The light guide plate of claim 1, wherein the color filter further comprises a black matrix having a lattice pattern.
3. The light guide plate of claim 1, wherein the color filter further comprises a light shielding film for shielding ultraviolet wavelength light beams.
4. The light guide plate of claim 2, wherein the color layer is formed by a plurality of color filter elements of red (R), green (G), and blue (B) arranged in a predetermined pattern.
5. The light guide plate of claim 4, wherein the color filter elements fill spaces defined in the black matrix.

6. The light guide plate of claim 4, wherein the color filter elements are arranged in a deltoid pattern, a striped pattern, or a mosaic pattern.
7. The light guide plate of claim 1, further comprising a plurality of scattering dots formed on the bottom surface, for reflecting and scattering light beams in directions toward the light emitting surface.
8. A surface light source comprising:
 - a light source;
 - a light guide plate for transmitting light beams received from the light source, comprising: an incident surface for receiving light beams; an emitting surface for transmitting the light beams; and a bottom surface opposite to the emitting surface for reflecting the light beams in directions toward the emitting surface; and
 - a color filter disposed on the emitting surface of the light guide plate, the color filter comprising a color layer for a full color display.
9. The surface light source of claim 8, wherein the color filter further comprises a black matrix having a lattice pattern.
10. The surface light source of claim 8, wherein the color filter further comprises a light shielding film for shielding ultraviolet wavelength light beams.
11. The surface light source of claim 9, wherein the color layer is formed by a plurality of color filter elements of red (R), green (G), and blue (B) arranged in a predetermined pattern.

12. The surface light source of claim 11, wherein the color filter elements fill spaces defined by the black matrix.
13. The surface light source of claim 11, wherein the color filter elements are arranged in a deltoid pattern, a striped pattern, or a mosaic pattern.
14. The surface light source of claim 8, wherein the light guide plate further comprises a plurality of scattering dots formed on the bottom surface for reflecting and scattering light beams toward the light emitting surface.
15. The surface light source of claim 8, wherein the light source is a cold cathode fluorescent lamp or a light emitting diode.
16. A surface light source system comprising:
 - a liquid crystal pane; and
 - a back light source including:
 - a light source; and
 - a light guide plate located beside said light source and defining an incident surface for receiving light beams, an emitting surface for transmitting the light beams; wherein
 - a color filter is disposed between the back light source and the liquid crystal panel.
17. The surface light source system of claim 16, wherein said light guide plate further includes a reflection surface for reflecting the light toward the emitting surface.